

IN THE CLAIMS:

1-49. (cancelled)

50. (new) A method for controlling an electrophotographic printer or copier that has at least one developer station for developing a latent charge image on a photoconductor with toner, comprising the steps of:

detecting a toner discharge from the developer station during the print operation and starting a developer regeneration process when the detected toner discharge fulfills a predetermined first regeneration criterion;

10 generating a charge image on the photoconductor, developing the charge image by the developer station, and removing the developed image by a cleaning device without being transfer-printed onto a recording medium; and

introducing new toner into the developer station.

15 51. (new) A method according to claim 50 wherein an average toner discharge is determined for time intervals of predetermined length, and in which the first regeneration criterion is fulfilled when the average toner discharge has fallen below a predetermined threshold for a predetermined number of successive time intervals.

20 52. (new) A method according to claim 50 wherein the printer or copier has a transfer belt on which the developed toner image is transfer-printed from the photoconductor in normal operation and from which the transfer-printed toner image is transfer-printed onto the recording medium.

25 53. (new) A method according to claim 52 wherein in the developer regeneration process, the developed image is wholly or partially transfer-printed onto the transfer belt and the transfer-printed portion of the image is removed from the transfer belt by a transfer belt cleaning device, and a portion of the image that is not transfer-printed is removed from the photoconductor by a photoconductor cleaning device.

54. (new) A method according to claim 53 wherein the developed image is transfer-printed onto the transfer belt at 75% to 100% in the developer regeneration process.

55. (new) A method according to claim 52 wherein the transfer belt is moved forward of the transport path of the recording medium in the developer regeneration process.

56. (new) A method according to claim 50 wherein whole-area patterns with an areal coverage of 10% to 50% are generated on the photoconductor in the developer regeneration process.

10 57. (new) A method according to claim 50 wherein the toner discharge is determined using print data.

58. (new) A method according to claim 57 wherein the toner discharge is determined in that a printed pixel count or a pixel count to be printed is added up and weighted with its inking level.

15 59. (new) A method according to claim 50 that provides a preparation mode into which the printer or copier is brought before a beginning of print operation, and in which the printer or copier is brought into the preparation mode at a beginning of the developer regeneration process.

20 60. (new) A method according to claim 59 wherein the preparation mode comprises at least one of the following operations:

powering up the developer station,

function testing of the developer station,

activating the developer, and

calibrating operating parameters.

25 61. (new) A method according to claim 50 wherein the printer or copier comprises a plurality of developer stations whose toner discharge is

respectively detected and in which for the case that the developer regeneration process is started for one developer station, it is checked whether the detected toner discharge of the remaining developer stations fulfills a second regeneration criterion, and a developer regeneration process 5 is likewise started for developer stations in which the second regeneration criterion is fulfilled.

62. (new) A method according to claim 61 wherein the second regeneration criterion is fulfilled when the average toner discharge has fallen below a predetermined threshold for a predetermined number of successive 10 time intervals that is less than the predetermined threshold in the first regeneration criterion.

63. (new) A method for controlling an electrophotographic printer or copier that has at least two developer stations for developing a latent charge image on a photoconductor, comprising the steps of:

15 during a print operation using print data to determine which developer stations are needed for printing of the data; and

in the event it is established that a developer station was not needed or will not be needed for a predetermined time span, shifting said developer station into a standby state in which at least one part of mechanical actuators 20 of the developer station is stopped.

64. (new) A method according to claim 63 wherein functional voltages of the developer station are connected in a standby state such that no toner transfer can occur between the developer station and the photoconductor.

25 65. (new) A method according to claim 64 wherein the developer station is moved away from the photoconductor in the standby state.

66. (new) A method according to claim 65 wherein the developer station is moved away from the photoconductor during the standby state when a temporal duration of the standby state exceeds a predetermined threshold.

67. (new) A method according to claim 63 wherein the standby state is ended when, using the print data, it is established that the developer station is required for printing of the data.
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68. (new) A method according to claim 67 wherein the print data are broadly, anticipatorily analyzed so that a time interval between the analysis of the print data and a point in time at which the image corresponding 10 to said data is to be developed by the associated developer station is sufficient in order to shift said developer station from the standby state into a print operation state.

69. (new) A method according to claim 63 wherein during the standby state of the developer station the developer contained therein is 15 activated at predetermined intervals.

70. (new) A method according to claim 69 wherein it is determined how often or how long the developer has been activated during the standby state, and in the event that a number of the activations or a duration of the activation exceeds a predetermined threshold, no further activations are 20 implemented for a duration of the standby state.

71. (new) A method according to claim 63 wherein at least two printing groups with respectively one separate electrophotography device are provided in the printer or copier, and wherein at least a part of the components of the electrophotography device is shut down when the last 25 developer station of the printing group is shifted into the standby state.

72. (new) A method of claim 63 wherein a toner discharge is detected from a developer station during the print operation and starting a developer regeneration process wherein the detected toner discharge fulfills a predetermined first regeneration criterion, and generating a charge image on

the photoconductor, developing the charge image by the developer station, and removing the developed image by a cleaning device without being transferred-printed onto a recording medium, and introducing new toner into the developer station.

5 73. (new) A method according to claim 63 wherein during the standby state of the developer station, the developer is activated at predetermined intervals until a first regeneration criterion is fulfilled, then no further developer activations are implemented in the developer station for a remaining duration of the standby state, and a developer regeneration process waits until the developer station is required for development or until another developer station of the printer or copier starts a developer regeneration process.

10 74. (new) A method according to claim 63 wherein when a developer regeneration process is started for one developer station, developer regeneration processes of further developer stations whose detected toner discharge fulfills a second or a first regeneration criterion are implemented in the following order:

15 developer stations that are not found in the standby state,
developer stations that are found in the standby state and that do not
fulfill the first regeneration criterion, and

20 developer stations that are found in the standby state and that fulfill the
first regeneration criterion.

25 75. (new) A control device for an electrophotographic printer or copier that has at least one developer station for developing a latent charge image on a photoconductor with toner, said control device performs the functions of:

detecting toner discharge from the developer station during print operation and which starts a developer regeneration process when the detected toner discharge fulfills a predetermined first regeneration criterion;

5 when a charge image is generated on a photoconductor, detecting the charge image by the developer station and removing the developed image by a cleaning device without being transfer-printed onto a recording medium; and

introducing new toner into the developer station.

76. (new) A control device according to claim 75 that is suited to determine an average toner discharge for time intervals of predetermined length, and in which the first regeneration criterion is fulfilled when the average toner discharge has fallen below a predetermined threshold for a predetermined number of successive time intervals.

77. (new) A control device according to claim 75 wherein the printer or copier has a transfer belt on which the developed toner image is transfer-printed from the photoconductor in normal operation and from which the transfer-printed toner image is transfer-printed onto the recording medium.

78. (new) A control device according to claim 77 wherein in the developer regeneration process the developed image is wholly or partially transfer-printed onto the transfer belt and the transfer-printed portion of the image is removed from the transfer belt by a transfer belt cleaning device, and a portion of the image that is not transfer-printed is removed from the photoconductor by a photoconductor cleaning device.

79. (new) A control device according to claim 78 wherein the developed image is transfer-printed onto the transfer belt at 75% to 100% in the developer regeneration process.

80. (new) A control device according to claim 77 that triggers removal of the transfer belt forward of a transport path of the recording medium in the developer regeneration process.

81. (new) A control device according to claim 75 that determines the toner discharge using print data.

82. (new) A control device according to claim 81 that determines the toner discharge in that a printed pixel count or a pixel count to be printed
5 is added up and weighted with its inking level.

83. (new) A control device according to claim 75 that provides a preparation mode into which the printer or copier is brought before a beginning of the print operation, and that brings the printer or copier into the preparation mode at a beginning of the developer regeneration process.

10 84. (new) A control device according to claim 83 in which the preparation mode comprises at least one of the following operations:

powering up the developer station,

function testing of the developer station,

activating the developer, and

15 calibrating operating parameters.

85. (new) A control device according to claim 76 wherein the printer or copier comprises a plurality of developer stations whose toner discharge is respectively detected and when it starts the developer regeneration process for one developer station the control device checks whether detected toner
20 discharge of remaining developer stations fulfills a second regeneration criterion, and starts a developer regeneration process for developer stations in which the second regeneration criterion is fulfilled.

86. (new) A control device according to claim 85 wherein the second regeneration criterion is fulfilled when an average toner discharge has fallen below a predetermined threshold for a predetermined number of successive time intervals that is lower than the predetermined threshold given
25 the first regeneration criterion.

87. (new) A control device for an electrophotographic printer or copier that has at least two developer stations for development of a latent charge image on a photoconductor, said control device performing the functions of:

5 using print data during a print operation to determine which developer stations are required for printing of the data; and

10 in the event that it is determined that a developer station has not been required or will not be required for a predetermined time span, the developer station is shifted into a standby state in which at least a part of mechanical actuators of the developer station is stopped.

88. (new) A control device according to claim 87 wherein in the standby state functional voltages of the developer station are connected such that no toner transfer can occur between the developer station and the photoconductor.

15 89. (new) A control device according to claim 87 wherein the developer station is moved away from the photoconductor in the standby state.

20 90. (new) A control device according to claim 89 that triggers that the developer station is moved away from the photoconductor during the standby state when a temporal duration of the standby state exceeds a predetermined threshold.

91. (new) A control device according to claim 87 that triggers that the standby state is ended when, using the print data, it is established that the developer station is required for printing of the data.

25 92. (new) A control device according to claim 91 that is suited to broadly, anticipatorily analyze the print data so that a time interval between analysis of the print data and a point in time at which the image corresponding to said data is to be developed by the associated developer station is

sufficient in order to shift said developer station from the standby state into a print operation state.

93. (new) A control device according to claim 87 wherein during the standby state of the developer station the control device triggers that the developer contained therein is activated at predetermined intervals.
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94. (new) A control device according to claim 93 that determines how often or how long the developer has been activated during the standby state and, when a number of the activations or a duration of the activation exceeds a predetermined threshold, the control device triggers that no further 10 activations are implemented for a duration of the standby state.

95. (new) A control device according to claim 87 wherein at least two printing groups with respectively one separate electrophotography device are provided in the printer or copier, and the control device triggers that at least a part of the components of the electrophotography device is shut down 15 when a last developer station of the printing group is shifted into the standby state.

96. (new) A control device according to claim 87 wherein said control device also performs the functions of detecting toner discharge from the developer station during print operation and which starts a developer 20 regeneration process wherein the detected toner discharge fulfills a predetermined first regeneration criterion, and when a charge image is generated on a photoconductor, detecting the charge image by the developer station and removing the developed image by a cleaning device without being transfer-printed onto a recording medium, and introducing new toner into the 25 developer station.

97. (new) A control device according to claim 87 wherein during the standby state of the developer station, the control device triggers that the developer is activated at predetermined intervals until a first regeneration criterion is fulfilled, then no further developer activations are implemented in

the developer station for a remaining duration of the standby state, and the developer regeneration process waits until the developer station is required for development or until another developer station of the printer or copier starts a developer regeneration process.

5 98. (new) A control device according to claim 97 wherein when the developer regeneration process is started for one developer station, the control device triggers developer regeneration processes of further developer stations whose detected toner discharge fulfills a second or said first regeneration criterion in the following order:

10 developer stations that are not found in the standby state,
 developer stations that are found in the standby state and that do not
 fulfill the first regeneration criterion, and
 developer stations that are found in the standby state and that fulfill the
 first regeneration criterion.